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DEC 21 2006U.S. Patent Application No. 10/780,309
Reply to Office Action of September 27, 2006

Docket No.: V9661.0054

AMENDMENTS TO THE CLAIMS

1. (Original) An electrode member, comprising a substrate member and an antimony modified tin dioxide film coating member,

wherein the coating member comprises connected particles from about 3 nm to about 5 nm in size, and

wherein the particles comprise Sn and Sb in a ratio from about 6:1 to about 10:1.

2. (Original) The electrode member according to claim 1, wherein the substrate member is made of a material selected from the group consisting of titanium, gold coated titanium and other inert conducting materials.

3. (Original) The electrode member according to claim 1, wherein the substrate member is made of titanium.

4. (Original) The electrode member according to claim 3, wherein the substrate member is spot-welded with a titanium wire.

5. (Currently Amended) An electrode member comprising a substrate member and a coating member, wherein the coating member comprises a tin dioxide modified by antimony, and wherein the coating member comprises connected particles from about 3 nm to about 5 nm in size.

6. (Currently Amended) The electrode member according to claim 5, wherein the coating member comprises connected particles of [[less than]] about 5 nm in size.

7. (Currently Amended) The electrode member according to claim 6, wherein the connected particles are [[from]] about 3 nm ~~to about 5 nm~~ in size.

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8. (Original) The electrode member according to claim 5, wherein the coating member comprises connected particles of Sn and Sb.

9. (Currently Amended) The electrode member according to claim 8, wherein the Sn and Sb are in an atomic ratio of [[more]] no less than 6:1.

10. (Currently Amended) The electrode member according to claim 8, wherein the Sn and Sb are in an atomic ratio of [[less]] no more than 10:1.

11. (Original) The electrode member according to claim 5, wherein the coating member comprises nickel.

12. (Currently Amended) The electrode member according to claim 11, wherein the Sb and Ni are in an atomic ratio of [[less]] no more than 10:1.

13. (Currently Amended) The electrode member according to claim 11, wherein the Sb and Ni are in an atomic ratio of [[more]] no less than 4:1.

Claims 14-20 (Cancelled).

21. (Original) An ozone generation system comprising an electrode according to claim 1 for electrochemical generation of ozone.

22. (Original) The ozone generation system according to claim 21, further comprising a solid polymer electrolyte.

23. (Currently Amended) The ozone generation system according to claim 22, wherein the solid polymer electrolyte is Nafion a sulfonated tetrafluoroethylene copolymer.

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Claims 24 -26 (Cancelled).

27. (New) The ozone generation system according to claim 21, further comprising an electrolyte selected from the group consisting of HClO_4 , H_2SO_4 , and H_3PO_4 .

28. (New) The ozone generation system according to claim 21, further comprising an electrolyte having a concentration from about 0.01 M to about 0.5 M.

29. (New) The ozone generation system according to claim 21, wherein a constant potential is applied to the electrode member.

30. (New) The ozone generation system according to claim 29, wherein the constant potential is in the range from about 1.5V to about 3V.

31. (New) The ozone generation system according to claim 30, wherein the constant potential is about 2.2V.

32. (New) The ozone generation system according to claim 30, wherein the constant potential is about 2.5V.

33. (New) The ozone generation system according to claim 21, further comprising a reference electrode member comprising a Ag/AgCl material.

34. (New) The electrode member according to claim 9, wherein the Sn and Sb are in an atomic ratio of no more than 62.5:1.

35. (New) The electrode member according to claim 33, wherein the Sn and Sb are in an atomic ratio of about 62.5:1.